



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/029,628	10/22/2001	Avinash Dalmia	03141-P0381A	5048

24126 7590 05/14/2004

ST. ONGE STEWARD JOHNSTON & REENS, LLC  
986 BEDFORD STREET  
STAMFORD, CT 06905-5619

EXAMINER

LEADER, WILLIAM T

ART UNIT	PAPER NUMBER
----------	--------------

1742

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/029,628	<b>Applicant(s)</b> DALMIA ET AL.	
	<b>Examiner</b> William T. Leader	<b>Art Unit</b> 1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

### DETAILED ACTION

1. Receipt of papers filed on February 23, 2004 is acknowledged. Claims 1-32 are pending.

#### *Claim Rejections - 35 USC § 112*

2. Claims 1-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. As stated in the previous office action, independent claims 1, 13 and 23 recite a substrate, a first electrode deposited on said substrate, and a second electrode deposited on said substrate. Paragraph 0038 of the specification discusses thin film electrodes while paragraph 0039 discusses thick film electrodes. In the context of the specification and figures 1 and 2, it appears that the electrodes are formed on a substrate by a deposition, i.e. coating, process. The term "deposited" in the claims, which is taken to describe the relationship between the substrate and electrodes in the recited apparatus, appears to be consistent with this manner of forming the electrodes. However, paragraph 0051 states that Fig. 3 shows an alternative embodiment where the electrodes are in a vertical fashion, whereby a plurality of members 46 may be placed on top of a plurality of extensions 48 in an alternating manner. It is not clear if applicant intends the claims to include the embodiment

shown in FIG.3. If so, it is not apparent in what manner the electrodes shown in figure 3 are "deposited" on a common substrate as recited in the claims.

4. The use of the trademark "Nafion" in claims 4, 22 and 26 renders these claims indefinite. Similarly, the use of "Teflon" in claims 15 and 29 renders these claims indefinite. See MPEP 2173.05(u).

### ***Claim Rejections - 35 USC § 103***

5. Claims 23 and 25-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joshi et al (5,593,552) in view of Murphy et al (5,972,196) for the reasons given in the previous office action and in view of the following comments.

### ***Response to Arguments***

6. Applicant's arguments have been considered but are not deemed to be persuasive. With respect to the rejection of the claims under 35 U.S.C. 112, applicant has amended the brief description of the drawings. This amendment is not seen as overcoming the ambiguity in the claims. Independent claims 1, 13 and 23 all require a substrate, a first electrode "deposited" on said substrate, and a second electrode "deposited" on said substrate. The claims are interpreted in light of the specification. Paragraph 0018 of the specification refers to an electrochemical gas generator including a substrate for providing a surface for electrode "deposition". Paragraph 0033 refers to a substrate which has a surface so that

electrodes may be "deposited" thereon. As explained in the rejection, the term "deposited" as used in the claims, is taken to describe the relationship between the substrate and electrodes. The electrodes are considered to be physically "on" the substrate in a manner consistent with a deposition process. The description of Fig. 3 in paragraph 0051 of the specification makes no mention of a substrate. It is not apparent how the configuration of electrodes shown in Fig. 3 would relate to a substrate. Thus, it is not clear if applicant intends the range of devices recited in the independent claims to include the arrangement shown in Fig. 3 and, if so, how the claims are to be interpreted.

7. Applicant has not addressed the rejection of claims 4, 15, 22, 26 and 29 due to the inclusion of trademarks. For the reasons given in MPEP 2173.05(u) these claims are indefinite.

8. With respect to the rejection under 35 U.S.C. 103, applicant argues that Murphy does not disclose, teach or suggest a coating for regulating the amount of gas generated. This argument is not convincing. A coating which regulates the amount gas generated is considered to include any coating material which is capable of increasing or decreasing gas generation. Murphy discloses the inclusion of a catalytic coating. As noted at page 9 of applicant's Remarks, a catalyst is generally taken to accelerate a reaction. Thus, a catalyst layer would have been expected to increase the amount of gas generated and would fall within the scope of coatings recited in instant claim 23. Since a catalyst layer would have been

expected to increase the amount of gas generated and the device recited in claim 23 is directed to a gas generator, the combination would have been suggested. At page 10 of the remarks, applicant states that applicant's coating reduces flooding, which reduces gas generation. Claim 23 does not recite this function of the coating and, as written, is not limited to such coatings.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William T. Leader whose telephone number is

Art Unit: 1742

571-272-1245. The examiner can normally be reached on Mondays-Thursdays and alternate Fridays, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WL  
William Leader  
May 11, 2004

ROY KING  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700